

Stormwater Pollution

- Rainfall runoff (stormwater) from roads, driveways, and parking lots is not treated at a wastewater treatment plant.
- Stormwater carries urban pollutants directly into our waterways through storm drains. Pollutants include: sediment, debris, litter, leaking autofluids, excess chemicals, fertilizers, petwaste, and other waste.
- Hard, smooth surfaces (like concrete storm drains) speeds up runoff, which ends up flowing into our streams at great velocity.
- Periodic, fast-flowing stormwater is highly erosive, and damages the banks and bottom of the stream channel. It damages stream life including insects, larvae, fish, and salamanders because it disrupts their habitat and ecological balance.

Stormwater and the Law

Montgomery County is regulated by and operates under a State of Maryland-issued National Pollutant Discharge Elimination System permit (MS4 permit) which prohibits polluted discharges or illicit flows into the storm drain system.

The County's stormwater permit addresses a universal phenomenon that affects everyone. Simply put, anything that leaks, or is left, or is thrown on the ground, on lawns, streets, homes, construction sites, and neighborhoods, that can be carried by stormwater runoff to our streams is regulated by this law. Nothing but rain is allowed in the storm drain.

Stream Restoration

In urban areas without historical stormwater management, stream damage is a common occurrence. Sections of Turkey Branch stream exhibited a number of stormwater-related problems including:

- Eroded stream banks with exposed tree roots
- Eroded channel bottom, which exposed sewer pipes crossing underneath
- Presence of trash, oil, yard waste and other illicit discharges brought in by the storm drain system

The stream restoration efforts along Turkey Branch boost the streams functionality and its ecology by:

- Stabilizing stream banks,
- Reestablishing habitat for fish, larvae, aquatic and amphibian wildlife,
- Reforesting areas along stream corridors,
- Restoring natural meander (s-curve) patterns found in healthy streams, and
- Preventing erosion and further sediment pollution.

Low Impact Development

Low Impact Development (LID) stormwater management focuses on retention, detention, or infiltration of rainfall and snowmelt to maintain a natural water balance. Rather than treating rainfall as a waste to be channeled quickly offsite and conveyed through pipes to ponds or basins, it is allowed to soak in.

- LID is often accomplished by using vegetated areas. Plants serve to slow the movement of water through an area, and roots siphon water into deeper soil layers.
- LID increases on-site water filtration and helps to clean excess runoff.

LID practices include:

- Rain gardens
- Rain Barrels
- Grassed swales
- Green roofs
- Pervious pavement
- Landscaping with native plants
- Parking lot filter strips
- Underground storage
- Bioretention basins

Benefits of LID stormwater management include:

- control of stormwater in a dispersed manner throughout the watershed
- reduced runoff being channeled into traditional stormwater infrastructure
- improved water quality and water balance in the watershed
- added aesthetic and habitat value
- lower burden on tax payers. The lower emphasis on built structures reduces installation and maintenance costs.

RainScapes Rewards Targeted Neighborhoods

The RainScapes Rewards Program offers residents and businesses financial incentives and technical assistance to install landscaping techniques that reduce stormwater runoff coming off their property. In a targeted neighborhood such as Wheaton Woods (see map overleaf), the County aims for at least 30% of properties to install RainScapes. Learn more about how to take advantage of the program to protect the watershed, starting in your own backyard: [www.montgomerycountymd.gov/RainScapes](http://www.montgomerycountymd.gov/RainScapes)

Prevent Stormwater Pollution

Your efforts to protect the stream water quality and the watershed save tax-payer dollars in the long run.

- Pick up litter and pet waste
- Don't hose lawn clippings and yard waste down the storm drain
- Don't apply fertilizers and pesticides before a rain event
- Don't wash your car in the driveway, take it to a car wash
- Stabilize loose soil to prevent sediment pollution

See a storm drain violation? See illegal dumping? Report it! Timely reporting is essential. Alleged violations will be investigated diligently. Call 240-777-7700 or visit [www.montgomerycountymd.gov/DEP](http://www.montgomerycountymd.gov/DEP)

Restoring  
TURKEY BRANCH  
Your Stream, Your Watershed



Before



Restoration



After

Stormwater is the leading cause of pollution and degradation in the County's streams.

Protecting and restoring our watersheds is the right thing to do for our communities, our children's future, public health, and wildlife. Please help us protect our precious waterways.



Department of Environmental Protection  
Montgomery County Maryland  
[www.montgomerycountymd.gov/DEP](http://www.montgomerycountymd.gov/DEP)



# Turkey Branch Watershed and Restoration Features



**Stormdrain Outfall Step Pool**  
Rocks are placed in front of storm drain outfalls to form a step pool system that dissipates the high velocity stormwater runoff prior to entering the stream.



**Stone Toe Protection**  
Lines of stone are laid along the base of the stream bank to protect it from heavier storm flows. The stone prevents the bank from being cut back and eroded away.



**Stormwater Management Ponds**  
These ponds receive runoff from streets, parking lots and other impervious, urban surfaces through storm drains. Without these ponds to absorb the first flush of stormwater runoff, our streams would be subjected to periodic, rapid rises in flow levels, which damage stream banks and stream life. Stormwater ponds are an integral part of stormwater management and watershed protection.



**Grading and Planting**  
Steep stream banks are graded back into a series of gently sloping steps. During high flow events, the stream has a wider fit stream channel and more surface to spread out along these mini-floodplains. Plants and vegetation roots help to stabilize and hold the banks in place.



**Cross Vane**  
Lines of stone are carefully laid down at an angle to help turn the flow of water toward the center of the stream. These vanes help to keep fast-flowing water away from the banks which prevents erosion and maintains stream bed elevation.



**Rock and Tree Pack**  
Large tree limbs and woody material are anchored along stream banks, to reduce stream bank erosion and to buttress terraces where new trees are planted. As the young trees grow, the woody material protects them from erosive storm flows.



## Watersheds of Montgomery County

A watershed is a defined area from which the water above and below the ground drains to a particular waterbody. Rainwater falling outside the boundary will flow into an adjacent watershed and another receiving water body. Turkey Branch stream drains into Rock Creek and is part of the larger Rock Creek watershed. It is in the Potomac River watershed because Rock Creek flows into the Potomac River. Since the Potomac River empties into the Chesapeake Bay, this same watershed is also part of the larger Chesapeake Bay watershed.